August 30, 2002 DOE/EA- 1438 .

FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT FOR THE FUTURE LOCATION OF HEAT SOURCE/RADIOISOTOPE POWER SYSTEM ASSEMBLY AND TEST OPERATIONS CURRENTLY LOCATED AT THE MOUND SITE

AGENCY: U.S. Department of Energy

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (the Department) has completed an Environmental Assessment for the Future Location of the Heat Source/Radioisotope Power System Assembly and Test Operations Currently Located at the Mound Site. Based on the analysis in the environmental assessment, the Department has determined that the proposed action, the relocation of the Department's heat source and radioisotope power system operations, does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of the *National Environmental Policy Act* of 1969 (NEPA). Therefore, the preparation of an Environmental Impact Statement is not required, and the Department is issuing this Finding of No Significant Impact (FONSI).

PUBLIC AVAILABILITY: Single copies of the environmental assessment and FONSI may be obtained from:

Mr. Timothy A. Frazier
U.S. Department of Energy
P.O. Box 66
Miamisburg, OH 45343-0066
Phone: (937) 865-3748
Facsimile: (937) 865-4489
Electronic mail: Tim.Frazier@HQ.DOE.GOV

FOR FURTHER INFORMATION ON THE DOE NEPA PROCESS CONTACT:

Ms. Carol Borgstrom
Director, NEPA Policy and Compliance
EH-42, Forrestal Building
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585-0113
Phone: (202) 586-4600
Facsimile: (202) 586-703 1

BACKGROUND: The Department has been assembling and testing heat sources and radioisotope power systems (HS/RPSs), which include radioisotope thermoelectric generators, **at** the Mound Site in Miamisburg, Ohio, for the past 35 years. After the events of September 11,2001, a Department-wide review of security identified the need for enhanced security measures at the Mound site to safeguard the materials associated with the Department's HS/RPS assembly and test operations. The Department analyzed a range of options in order to provide for the extra safeguard and security measures. These include either upgrading the safeguard and security infrastructure at the Mound site to enable the program to remain at its current location or transferring the operations to a more secure building at the Mound site itself. In addition, the Department considered two other alternative locations, the Pantex **Plant in 'Texas** and the Argonne National Laboratory-West (ANL-W) Site in Idaho both of which have enhanced security and safeguards measures in place because of other ongoing programs. In compliance with **the** requirements of NEPA, the Department prepared an environmental assessment to consider the potential environmental impacts associated with actions that might **be taken with** regard to the future location of the HS/RPS operations.

The Notice of Intent to prepare this environmental assessment was published in **the** Federal Register on May 31, 2002, (67 FR 38083). On June 21, 2002, the Department **extended the** public scoping period to July 5, 2002, (67 FR 42242). Comments received during the scoping period were considered in preparation of the draft environmental assessment. The draft environmental assessment was issued for public review on July 23, 2002. The **comments** received on the draft environmental assessment were considered in the preparation of the **final** environmental assessment.

Alternatives: Environmental impacts associated with the proposed future locations of the HS/RPS operations were evaluated for the following alternatives:

No Action Alternative: Under the "NO Action" alternative, the HS/RPS operations would continue at the Mound Site in the same facilities as currently configured and enhanced security would be provided as required.

Alternative 1 - Relocation of Onerations to T-Building; at the Mound Site: Under this alternative, the HS/RPS assembly and test operations would be relocated to the T-Building in the center of the Mound Site. The T-Building is an underground facility located in the area that is being remediated for eventual transfer to the City of Miamisburg. The T-Building would house all of the equipment needed for the nuclear operations associated with the HS/RPS operations as well as the storage of the materials and the finished products awaiting shipment to the users. As with the "NO Action" alternative, enhanced security would be provided as required.

Alternative 2 - Relocation of Operations to Pantex Plant: Under this alternative, the Department would transfer the HS/RPS assembly and test operations to an existing building at the Pantex Plant, northeast of Amarillo, Texas. Approximately half of a building, which is located in the Pantex Plant secure area, would be used for the HS/RPS operations. The site has the requisite safeguards and security in place.

Alternative 3 - Relocation of Operationsto ANL-W (the Department's Preferred Alternative): The majority of the HS/RPS assembly and test operations would take place in Building 792 at

ANL-W, which is located on the Idaho National Environmental and Engineering Laboratory near Idaho Falls, Idaho. The site has the requisite safeguards and security in place.

Environmental Impacts

The HS/RPS assembly and test operations would be conducted in the same manner as they are currently conducted at the Mound Site, independent of the alternative locations analyzed. Therefore, the differences in impacts among the alternatives are associated with the characteristics of the sites and facilities. For example, the involved worker dose, emissions, waste management, and utility usage for the RPS activities would be the same for each site. The differences among the alternatives with regard to the environmental impacts lay in the site characteristics. For example, under all three alternatives, water use would be well within each site's capacity; however, the current water use at the Pantex Plant is less than that at the Mound Site or ANL-W. Therefore, the increase in water use due to the HS/RPS assembly and test operations would be a relatively larger fraction of the total water usage at Pantex Site compared to the ANL-W site.

All alternatives would involve the use of existing facilities. The impacts to land use, visual resources, noise, and ecological resources would be negligible at each site. Under all three alternatives, the workforce, air quality, electricity, and natural gas/fuel oil use would be well within the capacity of each site's permits and infrastructure.

No significant socioeconomic impacts would result from relocation of the program on the areas surrounding any of the alternative sites. All workers employed during minor construction activities would come from within the region of influence (ROI) and any impact would be temporary. Under Alternative 1, there would be no change to the socioeconomic impacts to the Mound ROI. Under Alternatives 2 and 3, some of the staff with special expertise in HS/RPS assembly and test operations may relocate from Mound Site to the selected site. Some of the remaining workforce may be absorbed into the Mound Site environmental restoration activities with the remainder transferring to the new site or being severed from employment. At the selected site, the currently available resources would absorb the additional demand for housing and community services. Operations and maintenance staff hired from within the ROI population would not have an adverse impact on socioeconomic resources.

HS/RPS assembly and test operations are not expected to release radioactivity onsite or offsite to the atmosphere or water resources because the operations would involve only fully encapsulated radioactive material. Under normal operating conditions, the radioactive material would remain encapsulated and not pose a health risk. Therefore, HS/RPS operations, irrespective of the locations, would not impact the offsite doses to either the maximally exposed individual or the general population within 80 km (50mi). The doses to the maximum exposed involved worker and the total workforce from the HS/RPS operations are not expected to exceed between 50 and 1,000 mrem and 20.1 person-rem, respectively. Alternatives 2 and 3 include facilities that could be subject to a large aircraft crash. However, given the nature of the encapsulated material, a large release is not likely due to the materials ability to withstand severe impacts and high temperatures.

The transportation of the process material and the finished product to users would be carried out

by the Department's Office of Transportation Safeguards in accordance with their established procedure and protocol. The risks to the crews and the public from the shipment of Pu-238 from Los Alamos National Laboratory (LANL) to the HS/RPS operations and the shipment of the finished RPS to users are related to the different routes and associated mileage. The transportation risk per shipment of Pu-238 from LANL would be least for Alternative 2 - Pantex Plant, and greatest for Alternative 1 - Mound site. The transportation risk per shipment of finished RPSs is dependent on the user location and is not considered to be significant. The consequences of a transportation accident are insignificant since all material is shipped in certified/licensed shipping packages capable of withstanding transportation accidents.

There would be no adverse human health or environmental impacts under any of the alternatives. Therefore, minority and low-income populations would not be disproportionately affected, and there would be no environmental justice impacts.

The analysis in the environmental assessment does not indicate significant differences in human health and environmental impacts among the alternatives analyzed.

DETERMINATION: Based on the analysis in this environmental assessment, the Department has determined that selection of any of the alternative locations for continuation of the HS/RPS operations is not a major Federal action that would significantly affect the quality of the human environment within the meaning of NEPA. Therefore, the preparation of an Environmental Impact Statement is not required.

Issue in Washington, D.C. the thirtieth day of August 2002
William D. Magwood, IV, Director
Office of Nuclear Energy, Science and Technology

8/30/02